

Name: _____

pa1106: Factoring with box when $a = \text{prime}$ (v20)

Example

Use the box to factor $2x^2 - 9x - 18$.

Guess and check, based on factor pairs of -18 , until you find the pair that results in a linear coefficient of -9 after combining like terms.

*	x	-6
2x	$2x^2$	$-12x$
3	$3x$	-18

$2x^2 - 12x + 3x - 18$

Combine like terms.

$2x^2 - 9x - 18$

ANSWER: $(2x + 3)(x - 6)$

Question 1

Use the box to factor $5x^2 + 43x + 24$.

*	x	8
5x	$5x^2$	$40x$
3	$3x$	24

ANSWER: $(5x + 3)(x + 8)$

Question 2

Use the box to factor $3x^2 + 11x - 42$.

*	x	6
3x	$3x^2$	$18x$
-7	-7x	-42

ANSWER: $(3x - 7)(x + 6)$

Question 3

Use the box to factor $7x^2 - 64x + 64$.

*	x	-8
7x	$7x^2$	-56x
-8	-8x	64

ANSWER: $(7x - 8)(x - 8)$